

Determination of Performances of Some Mulberry (*Morus* spp.) Species Selected from Different Places of Turkey under Kahramanmaras Conditions

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Abstract : Common mulberry (*Morus levigate* Wall.) and purple mulberry (*Morus rubra* L.) species which were selected from different regions of Turkey were used as material in order to determine their performance. Therefore, phenological observations, pomological analysis (fruit size, fruit weight, fruit stalk length, acidity and TSS (Total Soluble Solids) and phytochemical properties organic acids (oxalic acid, succinic acid, citric acid, fumaric acid and malic acid) and vitamin C (ascorbic acid) total phenolics and antioxidant capacity values of mulberries) were determined. Phenological observations of seven different periods were also identified. Fruit weight values varied between 3.48 to 4.26 g. TSS contents value were from 14.36 to 21.30%, and fruit acidity was determined between 0.29 to 2.02%. The amount of ascorbic acid of Finger mulberry (*Morus levigate* Wall.) and purple mulberry (*Morus rubra* L.) species were identified as 35.60% and 363.28%. The highest value of total phenolic contents belonged to with a finger mulberry genotypes P1 934.80 mg/100g whereas the lowest one was of purple mulberry genotypes 278.70 mg/100g. FRAP and TEAC methods were used for determination of antioxidant capacity of the values of 0.58-22.65 micromol TE/kg and 20.34-31.6 micromol TE/kg. Total phenolics contents and antioxidant capacity strongly depends on fruit color intensity with a positive correlation. The obtained results have been found to be important as a source of future pharmacological studies and pomological and breeding programs.

Keywords : mulberry, phenology, phytochemical property, pomology

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